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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,212	04/03/2006	Karlheinz Freywald	D4695-00134	1864
8933	7590	06/08/2009		
DUANE MORRIS LLP - Philadelphia			EXAMINER	
IP DEPARTMENT			PATEL, REEMA	
30 SOUTH 17TH STREET				
PHILADELPHIA, PA 19103-4196			ART UNIT	PAPER NUMBER
			2812	
			MAIL DATE	DELIVERY MODE
			06/08/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/537,212	<b>Applicant(s)</b> FREYWALD, KARLHEINZ
	<b>Examiner</b> REEMA PATEL	<b>Art Unit</b> 2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 11 March 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3,5 and 7-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 5 and 7-12 is/are allowed.  
 6) Claim(s) 1,3 and 13 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 03 April 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statements (PTO/SB/08)  
 Paper No(s)/Mail Date 3/11/09, 3/18/09.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

This action is in response to an amendment filed 3/11/09.

### ***Information Disclosure Statement***

1. The information disclosure statements were (IDS) submitted on 3/11/09 and 3/18/09. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

### ***Drawings***

2. The objection to the drawings under 37 CFR 1.83(a) made in the previous Office Action (Non-Final Rejection, 9/12/08) is withdrawn because the broadened trench portions in the vicinity of the bond surfaces of two bonded semiconductors have been canceled from the claim(s).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Campana et al. (U.S. 2002/0173169 A1; 'Campana').

5. Regarding claim 1, Campana discloses a method for sealing an isolation trench, wherein each of the trenches has a first width (b1) and is slightly broadened (b2) at a specific trench portion longitudinally adjacent to the first width (see examiner-marked

Fig. 4a, below), wherein a low pressure deposition technique is used such that a void channel is formed in an area of each trench having the first width (b1) by closing an upper trench portion with a fill material and hermetically sealing each trench in the longitudinal direction of by low pressure material deposition from the broadened trench portion and along the length direction of each trench ([0033]-[0034]; Fig. 4a).

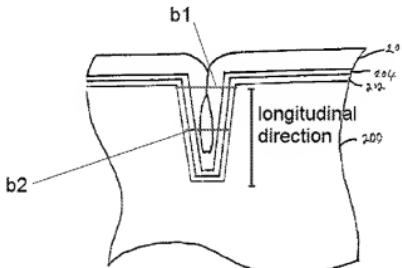


Fig. 16. 4A.

6. It is noted that there is no indication that b2 must be wider than b1, only that it is 'slightly broadened' as compared to some reference width. Additionally, the longitudinal direction is the vertical depth of the trench.

7. Regarding claim 3, Campana discloses that there may be multiple insulation-filled trenches (Fig. 2B) to electrically isolate active components.

8. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Natzle et al. (U.S. 6,335,261 B1; "Natzle").

9. Claim 13 is a product claim and as such, will be examined with regards to the structural features as claimed and the structural features that arise from the method steps included in the claim. See MPEP 2113.

10. Regarding claim 13, Natzle discloses a device comprising a wafer comprising isolation trenches, (i) wherein the each isolation trench is slightly broadened at least at one specific portion between at least two conical portions towards two portions of a smaller width than said broadened width (see examiner-marked Fig. 1C, below); (ii) wherein void channels are hermetically sealed in the longitudinal direction of each trench and void channels having formed during the filling the trenches having the smaller width by closing the upper trench portions with fill material (Fig. 1C; col 1, lines 35-64).

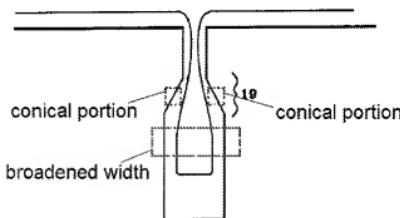


FIG. 1C

***Allowable Subject Matter***

11. Claims 5 and 7-12 are allowed. Claim 5 contains allowable subject matter because of the limitation that the broader trench portion is longitudinally in between two narrower trench portions and a filing process hermetically seals a void in a longitudinal direction of the isolation trench. Claims 7-12 depend on claim 5.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1, 3, and 13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REEMA PATEL whose telephone number is (571)270-1436. The examiner can normally be reached on M-F, 8:00-4:30 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571)272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. P./  
Examiner, Art Unit 2812  
6/4/09

/Alexander G. Ghyka/  
Primary Examiner, Art Unit 2812